UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/517,319 | 07/15/2005 | Philippe A. Tessier | 6013-149us | 3470 |

20988 7590 01/12/2007

OGILVY RENAULT LLP
1981 MCGILL COLLEGE AVENUE
SUITE 1600
MONTREAL, QC H3A2Y3
CANADA

| EXAMINER | |
|---|---|
| TSAY, MARSHA M | |
| **ART UNIT** | **PAPER NUMBER** |
| 1656 | |

| MAIL DATE | DELIVERY MODE |
|---|---|
| 01/12/2007 | PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

| Advisory Action Before the Filing of an Appeal Brief | Application No. 10/517,319 | Applicant(s) TESSIER ET AL. | |
|---|---|---|---|
| | Examiner Marsha M. Tsay | Art Unit 1656 | |

*--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

THE REPLY FILED 15 December 2006 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:
   a) ☒ The period for reply expires 6 months from the mailing date of the final rejection.
   b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

   Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
   (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
   (b) ☐ They raise the issue of new matter (see NOTE below);
   (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
   (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).
4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☒ Applicant's reply has overcome the following rejection(s): See Continuation Sheet.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
   The status of the claim(s) is (or will be) as follows:
   Claim(s) allowed: _____.
   Claim(s) objected to: _____.
   Claim(s) rejected: *1,3 and 5-7*.
   Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). _____
13. ☐ Other: _____.

ROBERT A. WAX
PRIMARY EXAMINER

Continuation of 5. Applicant's reply has overcome the following rejection(s): the rejction of claim 12 under 35 U.S.C. 102(b) as being anticipated by Hessian et al. (2001 Eur J Biochem 268(2): 353-363) and the rejection of claim 12 under 35 U.S.C. 102(e) as being anticipated by Freeze et al. (US 20050118688).

Continuation of 11. does NOT place the application in condition for allowance because: claims 1, 3, 5-7 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Freeze et al. (US 20050118688). As explained in the previous Office action, Freeze et al. teach aqueous compositions comprising antibodies against S100A8 or S100A9 protein (p. 35 [0305]). In Figure 17, Freeze et al. disclose adhesion of neutrophils to the immobilized glycans present on endothelial cells is effectively inhibited by both anti-S100A9 and mAbGB3.1 (p. 24 [0235]). Antibody mAbGB3.1 is an anti-carbohydrate antibody generated against carboxylate-enriched desialyated bovine lung N-glycans (p. 16 [0162]). In example 34, Freeze et al. teach antibody mAbGB3.1 blocks acute peritoneal inflammation in a mouse model of colitis and Crohn's Disease by preventing neutrophil extravasation (p. 43 [0365]). Freeze et al. further disclose that since S100A8/9 are involved in inflammation and also bind to the carboxylated glycans recognized by antibody mAbGB3.1, this antibody or agents that mimic the carboxylated sugar chains are considered also to be useful for treating arthritis, diabetes, malignancy (p. 44 [0367]), asthma, and gout (p. 4-5 [0020]). Freeze et al. do not specifically teach the administration of anti-S100A8/9 into a subject. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to administer the anti-S1008/9 composition of Freeze et al. into a mammalian subject for the treatment of arthritis because Freeze et al. disclose anti-S100A9 is functionally equivalent to mAbGB3.1 and would be effective in inhibiting the recruitment and activation of neutrophils (claims 1, 3, 5-7). The motivation to do so is given by Freeze et al., which teaches the administration of an analogous agent into a mammalian model.

In their response, Applicants assert the prior art teaches away from the claimed subjected matter and submit the Peffetti et al. reference. Applicants' arguments have been fully considered but they are not persuasive. On page 25 [0240], Freeze et al. disclose that it is contemplated that in some embodiments of the invention, the precise epitopes recognized by annexin I and S100A8/A9 and the physiological processes mediated in vivo by annexin I and S100A/A9 differ. Freeze et al. further discloses that unlike S100 proteins, annexin I does not modulate neutrophil adhesion to endothelial monolayers, but impedes neutrophil emigration. Therefore, one of ordinary skill in the art would recognize that the processes mediated by annexin and S100A/A9 will be different.

Freeze et al. disclose mAbGB3.1 inhibits extravasation of neutrophils and monocites in a murine model of peritoneal inflammation (p. 16 [0157], p. 43 example 34). In figure 17, Freeze et al. show anti-S100A9 significantly reduced binidng of activated human neutrophils to the N-glycans, as did mAbGB3.1 (p. 39 [0328]). The instant claims are drawn to a method comprising administering anti-S100A8/9 to an individual thereby inhibiting the recruitment and the activation of neutrophils. Freeze et al. has disclosed that anti-S100A9 is functionally equivalent to mAbGB3.1. Therefore, one of ordinary skill in the art would be motivated to administer anti-S100A9 to an individual in order to reduce an inflammatory reaction such as arthritis and expect a reasonable level of success because Freeze et al. disclose the administration of an analogous agent into a mammalian model was successful in inhibiting extravsation of neutrophils and reducing inflammation.